

LIFE<sup>3</sup>

# Understanding the true costs of Digital Preservation: LIFE<sup>3</sup>

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# What is LIFE?



# What is LIFE?

**L**ife cycle  
**I**nformation  
**F**or  
**E**-Literature

Modeling the costs of preserving digital resources over time

# LIFE stakeholders



Humanities Advanced  
Technology & Information Institute

- Medium to large libraries
- Higher Education and other research organisations
- Other memory institutions (i.e. archives and museums)

# LIFE<sup>3</sup> Dilemmas

- Approaches to digital preservation
  - Is it more cost effective to preserve physically or digitally?
  - How many items should be digitised without overspending?
  - Could outsourcing save the organisation money?
  - What are the true costs of digital preservation over time?
  
- Approaches to technology
  - What combination of sites and storage technologies offer the right combination of security, access and affordability?
  - What are the true costs of maintaining a digital preservation infrastructure over time?

# The LIFE<sup>2</sup> model

Lifecycle Stage	Creation or Purchase	Acquisition	Ingest	Bit-stream Preservation	Content Preservation	Access
	Lifecycle Elements	Digitisation	Selection	Quality Assurance	Repository Admin	Preservation Watch
....		Submission Agreement	Metadata	Storage Provision	Preservation Planning	Access Control
....		IPR & Licensing	Deposit	Refreshment	Preservation Action	User Support
....		Ordering & Invoicing	Holdings Update	Backup	Re-ingest	
		Obtaining	Reference Linking	Inspection	Disposal	
		Check-in				

# LIFE<sup>3</sup>: Estimating preservation costs

- **LIFE<sup>3</sup>:**
  - Aim: to develop the ability to estimate preservation costs across the digital lifecycle
  - The project is producing:
    - A series of costing models for each stage and element of the digital lifecycle
    - An easy to use web-based costing tool
    - Support to enable easy input of data
    - Integration to facilitate use of the results

# LIFE<sup>3</sup>: case studies

- Book digitisation
- E-Journals
- E-Prints
- Manuscript digitisation
- Newspaper digitisation
- Sound Archiving
- Web Archiving
- Higher Education Repositories
- Small – Medium – Large, Low – Medium – High Quality





# LIFE<sup>3</sup>: template approach

- Default data for typical content and organisational profiles
- Detailed inputs, specific outputs
- Lower barrier of access
- Custom profiles

# LIFE<sup>3</sup>: Excel model

Microsoft Excel - life3\_ver30.xls

File Edit View Insert Format Tools Data Window Help

Type a question for help

D55

**Estimated Lifecycle Cost**

Please note that the figures provided on this page are estimates only. You can increase confidence in these figures by editing the default values the model is using. To do so, please click on the tabs beginning with 'Refine...' at the bottom of the screen, then review and where necessary change the values being used for your organization and each of the model stages.

**Lifecycle costs for 2001 to 2004**

Including Non lifecycle Cost?  N

Creation or Purchase	Acquisition	Ingest	Bit-stream Preservation	Content Preservation	Access
Creation	Selection	Quality Assurance	Repository Administration	Preservation Watch	Access Provision
£24,000	£1,600	£2,800	£3,700	£18,000	£0
	Submission Agreement	Metadata	Storage Provision	Preservation Planning	Access Control
	£1,000	£0	£8,300	£18,000	£0
	IPR & Licensing	Deposit	Refreshment	Preservation Action	User Support
	£540	£1,300	£0	£5,000	£0
	Ordering & Invoicing	Holdings Update	Backup	Re-ingest	
	£1,700	£1,700	£110	£230	
	Obtaining	Reference Linking	Inspection	Disposal	
	£1,500	£0	£35	£200	
	Check-in				
	£1,700				
£24,000	£8,200	£5,800	£12,000	£42,000	£0
26%	9%	6%	13%	46%	0%

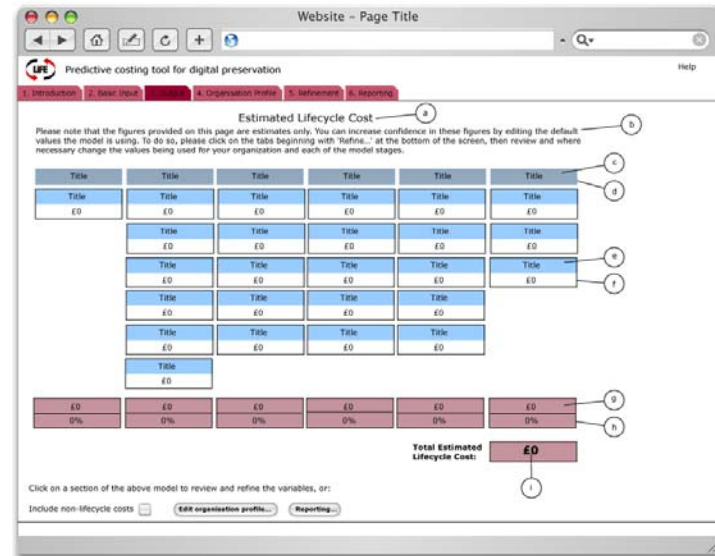
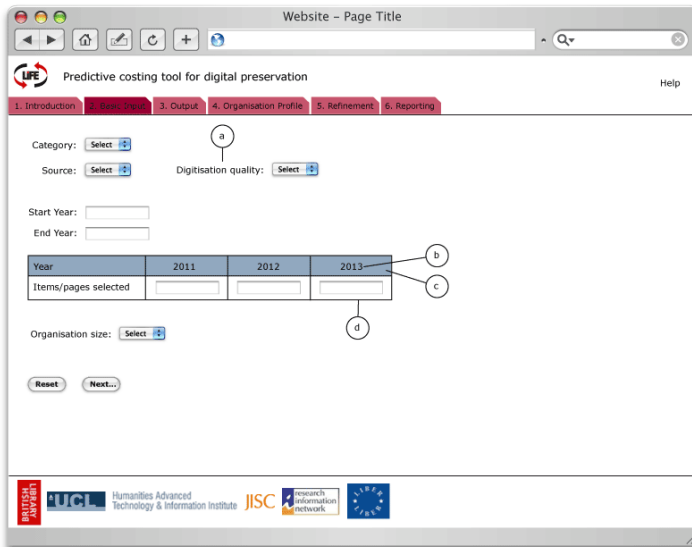
**Total Estimated Lifecycle Cost: £93,000**

Basic Input Output Refine Organisation Profile Refine Creation Data Refine Ingest & Acquis Data Refine Bitstream Pres Data Refine Content

Ready Calculate NUM

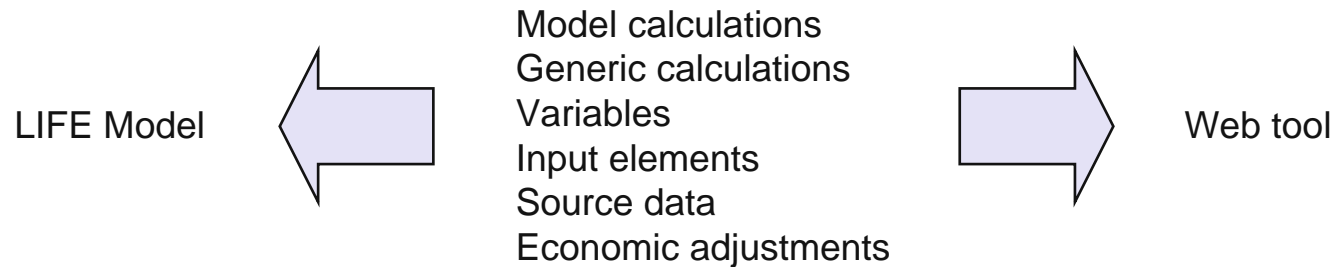
# LIFE<sup>3</sup>: web-based tool

- We are currently designing a web-based version of the tool with HATII
- Wider availability
- More accessible: quicker and easier to use



# LIFE<sup>3</sup>: web-based tool - maintainability

- A specification interface describes the model
- Allows for non-expert maintenance of the tool



# LIFE<sup>3</sup>: Issues and trends

## ■ Issues

- Tools need to be compatible to offer the greatest value
- Flexibility is required as not all assumptions made about digital preservation 10 years ago are proving true

## ■ Trends

- With good planning, digital preservation may be more stable than initially anticipated
- Libraries increasing their focus on access

# Thank you!

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- Questions?

